Alternative episiorrhaphy technique in modern obstetrics

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Abstract

Objectives. *The author proposes an alternative continuous stitch episiorrhaphy technique, in two planes, which provide a short execution time and faster healing.* ***Methods.*** *The study suggests a comparison of the results obtained by using an original episiorrhaphy procedure with the classic episiorrhaphy with separate points of suture. This new techniques was applied on 242 patients since 2011 in the Obstetrics and Gynecology Clinic from Oradea.* ***Results.*** *From 242 cases taken into the study, some complications occur as follows: only 2 cases of vaginal wall hematoma and 8 cases with inflammatory phenomena, without recording any wound dehiscence.* ***Conclusions.*** *The continuous stitch episiorrhaphy technique in two planes is fast, offers a good hemostasis and a rapid healing, being superior to the classical technique. These results open new inside for further using this alternative procedure in surgical obstetrical cases.*

Keywords: *episiorrhaphy, technique, rapid execution, hematoma, healing*

Introduction

The present study shows an alternative continuous stitch episiorrhaphy technique, in two planes, one superficial and another one deep (miorraphy of the levator ani), with the same thread tied at the two extremities of the suture[1].

Episiorrhaphy, literally surgical suturing, is a common surgical technique in obstetrics, aimed at preventing traumatic obstetric injuries, thus representing the primary prevention of static pelvic disorders and stress urinary incontinence occurring sometimes decades after having given birth. If, among many obstetricians, there is a quasi-unanimous consensus regarding the need for prophylactic episiotomy, the opinions are divided regarding reconstruction techniques[2]. The classical episiorrhaphy technique, with isolated suture points, using non-resorbable material is the most widespread, its shortcomings, represented by poor closing, local ischemia, relatively long execution time, postoperative pain and perineal scars generating dyspareunia, determined the imagining of alternative techniques, designed to eliminate these disadvantages[3].

Methods

The author evaluates the results obtained with an original episiorrhaphy procedure, based on his 25 years of experience, versus the classic episiorrhaphy procedure with separate points of suture. Stating in 2011 in the Obstetrics and Gynecology Clinic from Oradea, 4.269 births were assisted, of which 2.123 were cesarean (representing a percentage of 49.7%), and a number of 2.146 natural births (representing a percentage of 50.3%).

The patients signed an informed consent related to birth assistance which included the possibility of performing a prophylactic episiotomy, and the technique used has evolved over the years, gradually to the current technique.

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Results

In the case of vaginal births, episiorraphy was performed on a number of 1.615 cases (representing a percentage of 75.26% from the total). Of the 1.615 cases, the technique of continuous stitch episiorrhaphy was practiced in 242 cases (representing a percentage of 14.98% from the total). Depending on the degree of parity, classic procedure was performed with a percentage of 69.49% for primiparae, 27.70% for secundiparae, 6.13% for tertiparae and none for multiparae. The continuous stitch method was performed with 57.14% for primiparae, 37.69% for secundiparae, 6.13% for tertiparae and 2.04% for those with higher parity (Table 1). Of the 242 cases, there were complications as follows: 2 cases of vaginal wall hematoma (representing 0.83%), where was re-intervened in the first postpartum hs, performing hemostasis and suture restoration and 8 cases with inflammatory phenomena, without recording any wound dehiscence.

Because of the hemostatic properties of the continuous suture, the occurrence of hematomas was quite exceptional, postoperative pain was significantly lower than after episiorraphies performed with separate points of suture, and inflammation, suppuration and wound dehiscence were almost non-existent complications. In 99.17% of cases, healing occurred per primam, versus 89% with the classic technique, the postoperative comfort level, mentioned by the patients, being very good. As a logical consequence of rapid healing, without complications, and being virtually painless, postoperative scars were supple, almost invisible, patients reporting secondary dyspareunia only exceptionally.

Usually, in the clinic, it is not prescribed antalgic treatment for uncomplicated episiorraphies.

The modified technique consisted in:

- The starting point of the simple continuous suture is done in the superior angle of the vaginal section, using a slow resorption thread no. 1 and a triangular-tip needle, no. 8., where its end is tied, which also provides the tracking of the farthest end of the wound (Figure 1);
- The continuous suture continues down, suturing in a single plane the vaginal wall to the rectovaginal fascia. Using a single plane simplifies the technique and has no disadvantages (Figure 2);

Table 1 The comparison of classical episiorrhaphy and continuous stitch episiorrhaphy techniques applied

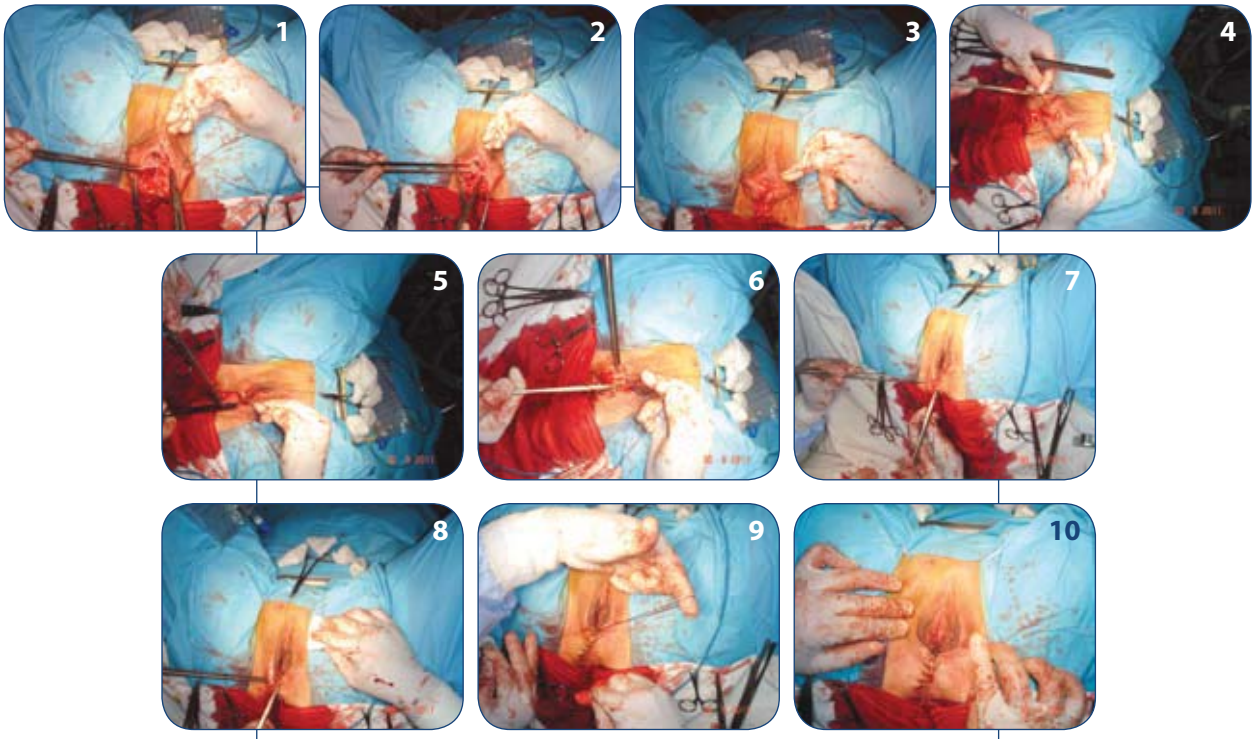
Techniques	Primiparae	Secundiparae	Tertiparae	Multiparae
Classical episiorrhaphy	69.49%	27.70%	6.13%	-
Continuous stitch episiorrhaphy	57.14%	37.69%	6.13%	2.04%

- After suturing the posterior vaginal wall, suture is continued down from the posterior commissure of the vulva (hymen ring), in a more profound plane, performing the miorraphy of the levator ani to the distal angle of episiotomy (Figure 3);
- The continuous suture continues in the superficial plane of the perineal tegument, from bottom to top, ending in fossa navicularis, where it is tied with itself, cutting the ends of catgut at a length of about 0.5 cm (Figure 4);
- The execution time of this type of episiorrhaphy varies between 2-5 minutes, depending on the skills of the operator;
- The immediate complications of the presented technique overlap with the complications of the usual technique with isolated stitches, that is the occurrence of hematoma of the rectovaginal space, the passage of the stitch in the rectal lumen, with the consequent emergence of rectovaginal fistulas, a reason for which control hemostasis and digital rectal examination at the end of intervention are compulsory. However, the percentage of hemorrhagic complications is greatly reduced because of properties of the hemostatic continuous suture (Figures 5-10).

Discussion

Starting from 1930s period, the method was further modified. Execution speed, rapid healing and with a low percentage of complications, elimination of extraction of non-resorbable perineal suture threads, supple scar and implicitly, the absence of dyspareunia, represented major advantages of this technique[4].

The original 'Rucker technique' consisted in a continuous stitch episiorrhaphy with resorbable material (catgut), which started from the posterior commissure of the vulva, suturing the rectovaginal fascia to the cranial extremity of episiotomy wound, then descending through the suture of the vaginal epithelium down to the posterior commissure of the vulva[5].



Figures 1-10. Successive phases of perineorrhaphy

It continued through the suture of the plane of levator ani to the caudal extremity of the wound, and came suturing the subcutaneous plane and the tegument of the posterior perineum, after which the ends of the catgut thread were passed with the needle, in latero-posterior direction in the cellular subcutaneous tissue of the buttock. The two ends of the thread were then sectioned in a grazing angle to the tegument, without being tied. This developed a continuous suture, without any knots, which closed the wound only through the adherence of the thread to the tissues[6].

Starting with 1985s, the author has performed Rucker episiorrhaphy, finding, however, some of its weaknesses, which he tried to correct.

Thus, after suture of vaginal submucous plane, access to cranial angle of the vaginal wound becomes difficult, and loss of suture threads in buttock depth represents not so much a physical inconvenience as a psychological one for the obstetrician, through the absence of tying the ends of the threads.

That is why, in time, spontaneously and intuitively, the author has made several changes to the original technique meant to simplify it and to remove the above described disadvantages.

Advantages of modified technique:

1. Simplicity and higher speed of execution;
2. Eliminating the difficulty of finding the superior vaginal angle of the episiotomy wound after suturing the recto-vaginal fascia (see Rucker episiorrhaphy);
3. Greater safety of restrained suture owing to the 2 knots at the ends of the continuous suture, so it cannot relax and provides better hemostasis and closing;
4. The amount of resorbable suture material left in the wound is smaller (reduced foreign body reaction);
5. Continuous stitch suture is represented, in fact, by a spiral that, in addition to the advantage of good closing of tissues, also achieves a good hemostasis without causing ischemia, because the spiral, through its configuration, is elastic. A possible asymmetry caused by the continuous stitch can be observed and corrected during suturing by making bigger and smaller steps on both sides of the tranche, so that when the suture reaches the navicular fossa the closing may be perfect.

Conclusions

The continuous stitch episiorrhaphy technique in two planes represent a technique with fast execution, good hemostatic effect, but non-ischemic, resulting in faster healing, reduced edema and local pain and supple scars, which do not interfere negatively with later sexual life, being superior in all respects to classical episiorrhaphy. These results show a great and higher applicability of this new technique in further surgical obstetrical cases. ■

References

1. Surcel I.V. et al. Post-partum perineorrhaphy without junctions, Gynecology-Obstetrics Meeting, Manageable obstetrical evaluation and of a actual chirurgical interventions, Buzau (Romania), 1985,117.
2. Surcel I.V., Surcel M. Obstetrics and Gynecology, Dacia Eds., Cluj-Napoca, (Romania), 2005.
3. ***Perineal and Anal Sphincter Trauma, Ed. Springer London, 2007.
4. Farook et al. Childbirth and Obstetric aTechniques, Mosby Ed., 2nd Eds., London, 1998.
5. www.blackwell-synergy.com
6. www.conradsimon.org